

AMENDMENTS TO THE CLAIMS:

1. (currently amended) A process of cleaning a precision surface comprising contacting ~~an~~ a reactive ion etched precision surface having vias, cavities, trenches or channels incorporated therein, said reactive ion etched precision surface containing reactive ion etching residue, with a composition which comprises liquid or supercritical carbon dioxide and a fluoride-generating species until the reactive ion etching residue is removed from the precision surface.

2. (currently amended) A process in accordance with Claim 1 wherein said fluoride-generating source species is a fluorine-containing acid.

3. (currently amended) A process in accordance with Claim 1 wherein said fluorine-containing acid is selected from the group consisting of hydrogen fluoride, fluorosulfonic acid and perfluorosulfonic acid.

4. (original) A process in accordance with Claim 1 wherein said fluoride-generating species is a fluorine-containing acid amine adduct.

5. (original) A process in accordance with Claim 4 wherein said fluorine-containing amine adduct is pyridine:hydrogen fluoride, amine:hydrogen fluoride or an alkylamine:hydrogen fluoride.

6. (original) A process in accordance with Claim 1 wherein said fluoride-generating species is an amine fluoride.

7. (original) A process in accordance with Claim 1 wherein said fluoride-generating species is a quaternary amine fluoride.

8. (original) A process in accordance with Claim 7 wherein said quaternary amine fluoride is selected from the group consisting of a tetraalkylammonium fluoride and a perfluoroalkylammonium fluoride.

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9. (original) A process in accordance with Claim 1 wherein said fluoride-generating species is a perfluororalkylsulfonyl fluoride.

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10. (original) A process in accordance with Claim 9 wherein said perfluororalkylsulfonyl fluoride is trifluoromethylsulfonyl fluoride or perfluorooctylsulfonyl fluoride.

11. (original) A process in accordance with Claim 1 wherein said fluoride-generating species is an alkylsulfonyl fluoride.

12. (currently amended) A process in accordance with Claim 1 wherein said fluoride-generating source species is an arylsulfonyl fluoride.

13. (currently amended) A process in accordance with Claim 1 wherein said fluoride-generating source species is an onium salt-containing fluorine.

14. (original) A process in accordance with Claim 13 wherein said onium salt containing fluorine is selected from the group consisting of benzene diazonium fluoride and benzene diazonium tetrafluoroborate.

15. (currently amended) A process in accordance with Claim 1 wherein said composition includes a component selected from the group consisting of a surfactant, a co-solvent and mixtures thereof.

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16. (currently amended) A process in accordance with Claim 1 wherein said contact between said reactive ion etched precision surface and said composition occurs at a pressure in the range of between about 1,000 psi and about 6,000 psi and at a temperature in the range of between about 40°C and about 100°C.

17. (currently amended) A process in accordance with Claim 1 wherein said reactive ion etched precision surface is provided by a semiconductor sample, a metal selected from the group consisting of aluminum, silicon, tungsten, titanium, tantalum, platinum, palladium, iridium, chromium, copper and silver, a polymer selected from the group consisting of polyimides and polyamides or insulators.

18. (currently amended) A process in accordance with Claim 17 wherein said reactive ion etched precision surface is provided by a semiconductor sample.

19. (original) A process in accordance with Claim 18 wherein said semiconductor sample is selected from the group consisting of a semiconductor wafer, a semiconductor chip, a ceramic substrate and a patterned film structure.

20. (original) A process in accordance with Claim 19 wherein said semiconductor sample is a semiconductor wafer.